

Applicant: Ludwig Brehm
Serial No.: 10/587,710
Docket No.: 1093-160PCT/US/RCE
Response to Non-Final Office Action Mailed November 9, 2011
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LISTING OF CLAIMS:

1. (Canceled)
2. (Previously presented) A process according to claim 58 wherein the adhesive layer of a radiation-crosslinkable adhesive is applied in the first pattern to the first film body by means of a printing process.
3. (Previously Presented) A process according to claim 32 wherein the adhesive layer of a radiation-crosslinkable adhesive is exposed in pattern form after application of the transfer film, whereby the adhesive layer hardens in a region which is structured in pattern form, and the carrier film is removed from the second film body including the first film body, the adhesive layer and regions of the magnetic layer so that the magnetic layer remains on the first film body in the first region which is structured in pattern form and in which the adhesive layer is hardened, and is removed with the carrier film in the second region in which the adhesive layer is not hardened, wherein the radiation-crosslinkable adhesive in the non-hardened condition has a lower adhesion force in relation to the magnetic layer than the adhesion force between the magnetic layer and the carrier film.
4. (Canceled)
5. (Previously Presented) A process according to claim 3 wherein the adhesive layer is then irradiated in a second exposure step for hardening of the regions which have not yet hardened of the adhesive layer.
6. (Previously Presented) A process according to claim 3 wherein a mask exposure device is used for the exposure operation.
7. (Previously Presented) A process according to claim 58 wherein the magnetic layer is a layer of magnetic nanoparticles.

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8. (Previously Presented) A process according to claim 7 wherein the layer of nanoparticles is applied as a deposit from a solution to the second film body.

9. (Previously Presented) A process according to claim 7 wherein the magnetic layer is applied to the second film body by sputtering.

10. (Previously Presented) A process according to claim 58 wherein the magnetic layer comprises amorphous metal glass.

11. (Previously Presented) A process according to claim 10 wherein the amorphous metal glass is formed from at least one of iron, cobalt, chromium, nickel, silicon and boron, and applied to the second film body by sputtering.

12. (Previously Presented) A process according to claim 58 wherein the magnetic layer is semi-transparent, a carrier layer of the transfer film is radiation-transparent and the adhesive layer is exposed from the side of the transfer film through the transfer film.

13. (Previously Presented) A process according to claim 58 wherein the first film body is radiation-transparent and the adhesive layer is exposed from the side of the first film body through the first film body.

14. (Previously Presented) A process according to claim 58 wherein the radiation-crosslinkable adhesive in a non-hardened condition has a lower adhesion force in relation to the magnetic layer than the adhesion force between the magnetic layer and the second film body.

15. (Previously Presented) A process according to claim 58 wherein the adhesive layer comprises an electrically non-conductive adhesive.

16. (Previously Presented) A process according to claim 58 wherein the adhesive layer is applied to the first film body by means of intaglio printing.

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17. (Previously Presented) A process according to claim 58 wherein the adhesive layer is applied to the first film body by means of offset printing or flexoprinting.

18. (Previously Presented) A process according to claim 58 wherein the transfer film has a release layer between a carrier film and the magnetic layer.

19-28. (Canceled).

29. (Previously Presented) A process according to claim 58, wherein the transfer film consists of a carrier film, a release layer and the magnetic layer, the release layer being disposed between the carrier film and the magnetic layer.

30. (Previously Presented) A process according to claim 58, wherein the transfer film consists of a carrier film and the magnetic layer.

31. (Previously Presented) A process according to claim 30, wherein an adhesive force between the magnetic layer and the carrier film enables the release of at least a portion of the magnetic layer from the carrier film.

32. (Previously Presented) A process for the production of a security element for value documents including a second film body with a partial magnetic coating, comprising:

an adhesive layer of a radiation-crosslinkable adhesive is applied to a first film body, the adhesive layer of the radiation-crosslinkable adhesive is hardened structured in pattern form by a procedure whereby the adhesive layer is at least one of applied to the first film body in a form structured as a first pattern and is irradiated in a pattern form differently from the first pattern; and

a second film body forming a transfer film which has a carrier film and a magnetic layer is applied to the adhesive layer with an orientation of the magnetic layer relative to the adhesive layer wherein the irradiation operation is effected prior to application of the transfer film to the adhesive layer, and the carrier film is removed from the second film body including the first film

body, the adhesive layer and regions of the magnetic layer in the form of a partial magnetic coating, wherein the magnetic layer remains on the first film body in a first region structured in pattern form and in a second region structured in pattern form the magnetic layer remains on the carrier film and is removed with the carrier film from the first film body, wherein the adhesive layer of a radiation-crosslinkable adhesive is irradiated in pattern form prior to application of the transfer film in such a way that the adhesive layer hardens in a region which is structured in pattern form, the transfer film is applied to the adhesive layer which is hardened structured in pattern form, and the carrier film is removed from the second film body including the first film body, the adhesive layer and the magnetic layer so that the magnetic layer remains on the first film body in the first region which is structured in pattern form and in which the adhesive layer is not hardened and is removed with the carrier film in the second region which is structured in pattern form and in which the adhesive layer is hardened.

33. (Previously presented) A process according to claim 32, wherein the magnetic layer is a layer of magnetic nanoparticles.

34. (Previously presented) A process according to claim 33, wherein the layer of nanoparticles is applied as a deposit from a solution to the carrier film.

35. (Previously presented) A process according to claim 33, wherein the magnetic layer is applied to the carrier film by sputtering.

36. (Previously presented) A process according to claim 32, wherein the magnetic layer comprises amorphous metal glass.

37. (Previously presented) A process according to claim 36, wherein the amorphous metal glass is formed from at least one of iron, cobalt, chromium, nickel, silicon and boron, and applied to the carrier film by sputtering.

38. (Canceled)

39. (Previously presented) A process according to claim 32, wherein the first film body is radiation-transparent and the adhesive layer is exposed from the side of the first film body through the first film body.

40. (Canceled)

41. (Previously presented) A process according to claim 32, wherein the adhesive layer comprises an electrically non-conductive adhesive.

42. (Previously presented) A process according to claim 32, wherein the adhesive layer is applied to the first film body by means of intaglio printing.

43. (Previously presented) A process according to claim 32, wherein the adhesive layer is applied to the first film body by means of offset printing or flexo printing.

44. (Previously presented) A process according to claim 32, wherein the transfer film has a release layer between the carrier film and the magnetic layer.

45. (Previously Presented) A process for the production of a security element for value documents including a second film body with a partial magnetic coating, comprising:

an adhesive layer of a radiation-crosslinkable adhesive is applied to a first film body, the adhesive layer of the radiation-crosslinkable adhesive is hardened structured in pattern form by a procedure whereby the adhesive layer is irradiated in pattern form; and

a second film body forming a transfer film which has a carrier film and a magnetic layer is applied to the adhesive layer with an orientation of the magnetic layer relative to the adhesive layer wherein the irradiation operation is effected prior to application of the transfer film to the adhesive layer, and the carrier film is removed from the second film body including the first film body, the adhesive layer and regions of the magnetic layer in the form of a partial magnetic coating, wherein the magnetic layer remains on the first film body in a first region structured in pattern form and in a second region structured in pattern form the magnetic layer remains on the

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carrier film and is removed with the carrier film from the first film body, wherein the adhesive layer of a radiation-crosslinkable adhesive is irradiated in pattern form prior to application of the transfer film in such a way that the adhesive layer hardens in a region which is structured in pattern form, the transfer film is applied to the adhesive layer which is hardened structured in pattern form, and the carrier film is removed from the second film body including the first film body, the adhesive layer and the magnetic layer so that the magnetic layer remains on the first film body in the first region which is structured in pattern form and in which the adhesive layer is not hardened and is removed with the carrier film in the second region which is structured in pattern form and in which the adhesive layer is hardened.

46. (Previously presented) A process according to claim 45, wherein the magnetic layer is a layer of magnetic nanoparticles.

47. (Previously presented) A process according to claim 46, wherein the layer of nanoparticles is applied as a deposit from a solution to the carrier film.

48. (Previously presented) A process according to claim 46, wherein the magnetic layer is applied to the carrier film by sputtering.

49. (Previously presented) A process according to claim 45, wherein the magnetic layer comprises amorphous metal glass.

50. (Previously presented) A process according to claim 45, wherein the amorphous metal glass is formed from at least one of iron, cobalt, chromium, nickel, silicon and boron, and applied to the carrier film by sputtering.

51. (Canceled)

52. (Previously presented) A process according to claim 45, wherein the first film body is radiation-transparent and the adhesive layer is exposed from the side of the first film body through the first film body.

53. (Canceled)

54. (Previously presented) A process according to claim 45, wherein the adhesive layer comprises an electrically non-conductive adhesive.

55. (Previously presented) A process according to claim 45, wherein the adhesive layer is applied to the first film body by means of intaglio printing.

56. (Previously presented) A process according to claim 45, wherein the adhesive layer is applied to the first film body by means of offset printing or flexo printing.

57. (Previously presented) A process according to claim 45, wherein the transfer film which has a release layer between the carrier film and the magnetic layer.

58. (Previously presented) A process for the production of a security element for a value document, the process comprising:

engaging a first side of a first film body with a second side of a second film body, the second film body forming a transfer film, the first side of the first film body having a radiation-crosslinkable adhesive layer, the adhesive layer forming a first pattern, the second side of the second film body having a magnetic layer, the engagement of the first film body with the second film body placing the adhesive layer in direct contact with a first portion of the magnetic layer, a second portion of the magnetic layer extending beyond the first pattern of the adhesive layer on the first side of the first film body;

irradiating the engaged first and second film bodies, whereby the adhesive layer is hardened to thereby attach to the first portion of the magnetic layer to the hardened adhesive layer; and

separating the first film body from the second film body, whereby the hardened adhesive layer and the attached first portion of the magnetic layer remain attached to the first film body, and the second portion of the magnetic layer remains attached to the separated second film body.